```python
from module.noise import white
from module.probability import RandomVariable, ParameterSet, IndependentInference
from module.simulation import stick_and_ball
from module.plot import plot_joint, fullplot

noise = 7.

# 1.) Parameters to infer
cm = RandomVariable(name= 'cm', range_min=0.5, range_max=1.5, resolution=60, mean=1., sigma=0.2)
gpas = RandomVariable(name='gpas', range_min=0.00005, range_max=0.00015, resolution=60,
mean=0.0001, sigma=0.00002)
# Ra = RandomVariable(name='Ra', range_min=50., range_max=150., resolution=60, mean=100.,
sigma=20.)

# 2.) Set up parameter set
cm_gpas = ParameterSet(cm, gpas)

# 3.) Sythetic data
t, v = stick_and_ball()
exp_v = white(noise, v)

# 4.) Set up inference
inf = IndependentInference(model=stick_and_ball, noise_std=noise, target_trace=exp_v,
parameter_set=cm_gpas, working_path="", speed='max', save=False)

# 5.) Run inference
if __name__ == "__main__":
    inf.run_sim()

# 6.) Run evaluation
inf.run_evaluation()

# 7.) Plot solution
print inf
plot_joint(inf, cm, gpas)
fullplot(inf)
```